

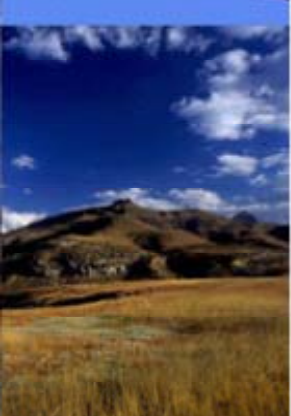
Achievements and challenges for Science support 07-08

Judith Kruger
Program Integrator: Science
Support



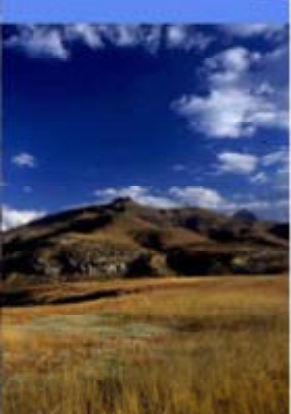
Science Support includes

- Data management and sharing
- GIS and Remote Sensing- I Smit
- Cybertracker
- TPC development and monitoring programs
- Science Extension
- Researcher Support



KNP Data catalogue

- Online facility for viewing and downloading datasets
<http://dataknp.sanpark.org>
- Only non spatial data added with limited research project data



Kruger National Park Data Repository



[KNP Home](#)

[Repository Home](#)

[Search for Data](#)

Welcome to the Kruger National Park Data Repository. This is the primary source for comprehensive information about scientific and research data sets collected within the KNP.

Repository Tools

- Search for Data

The repository search system is used to locate data sets of interest by searching through existing registered data sets. Presently the search covers all fields, including author, title, abstract, keywords, and other documentation for each data set. Use a '%' symbol as a wildcard in searches (e.g., '%biodiversity%' would locate any phrase with the word biodiversity embedded within it).

- [Browse existing KNP data sets](#)

Browse all existing data sets by title. This operation can be slow as the number of entries in the repository grows.

- Login

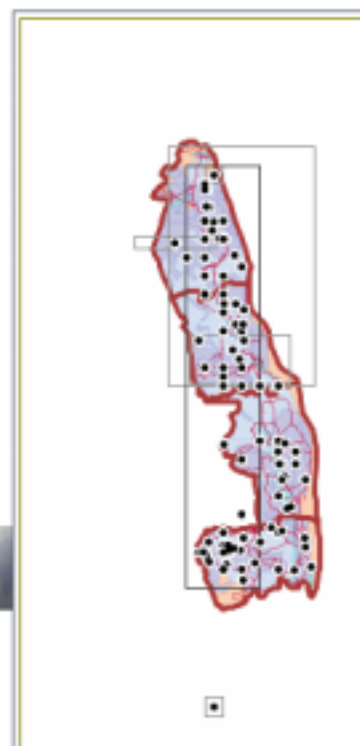
username:

organization:

password:

- Manage your account

- [Change your password](#)
- [Reset your password](#)



- Dataset Points
- Dataset Bounds
- Kruger Park boundaries
- Kruger Park business uni
- Kruger Park roads
- Kruger soils

Kruger National Park Data Repository



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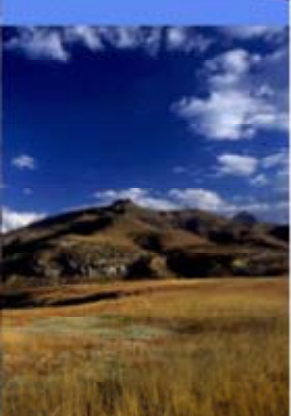
[Search for Data](#)

39 data packages found

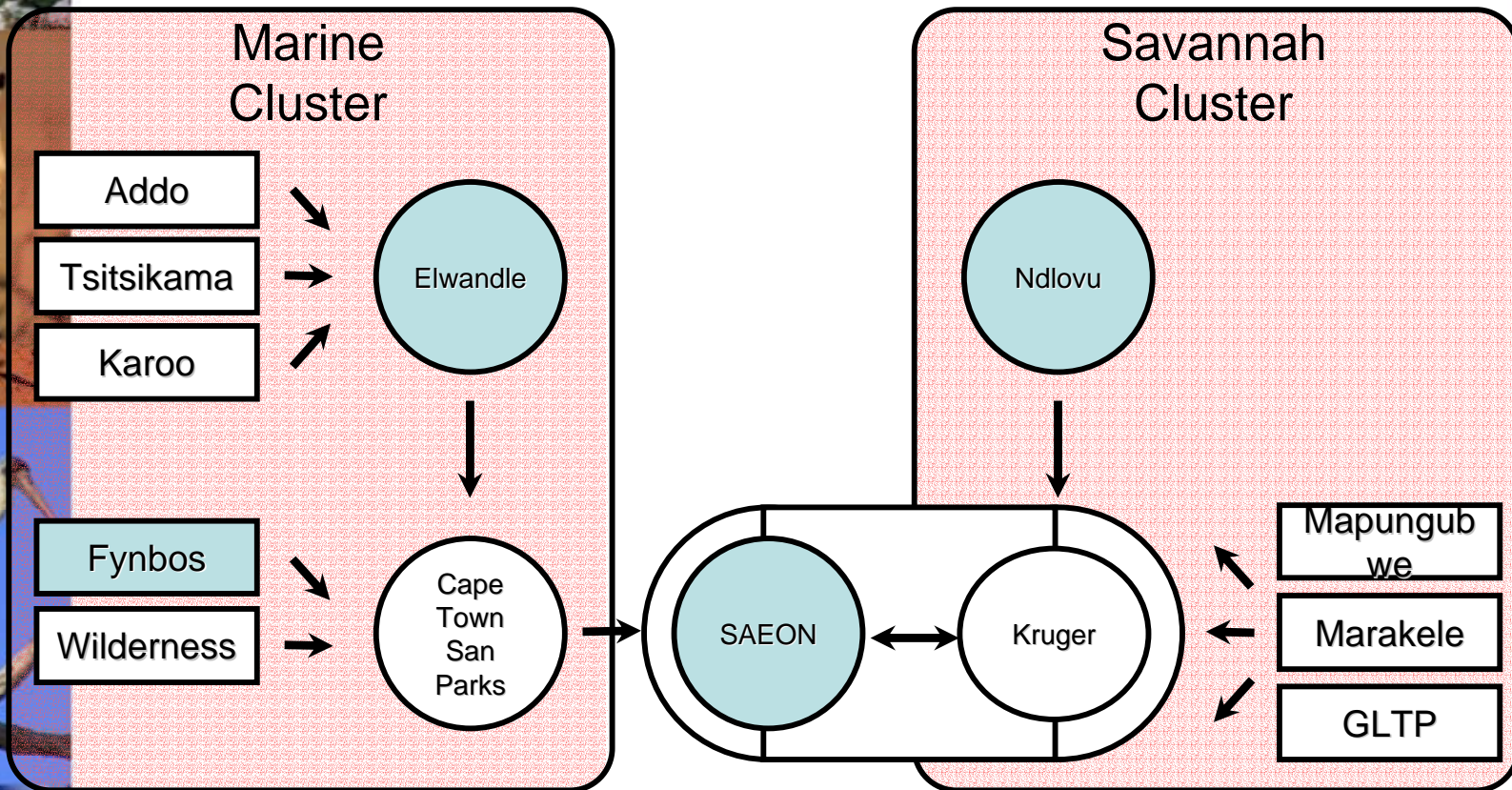
Title	Contacts	Organization	Keywords
» A GIS Model of Bovine Tuberculosis in the African Buffalo (<i>Syncerus caffer</i>) Population of Kruger National Park, S. Africa ID: judithk.348.1	Ryan	Universit of California Berkeley	GIS model, Bovine Tuberculosis, Buffalo
» Ant-plant dynamics: the effects of leaves and scale insects on ant species richness and abundance on <i>Acacia grandicornuta</i> and <i>Acacia robusta</i> ID: judithk.685.3	Kruger	SANParks	Acacia grandicornuta,, Acacia robusta,ant-plant mutualism,Lepisiota capensis,scale insects
» Assesment of strip transect and Distance sampling on aerial surveys of elephants in Kruger National Park ID: judithk.131.7	Griffin	University of Massachusetts	African elephants Distance sampling Strip transects
» Automatic weather station data for the Kruger National Park (2007) ID: judithk.766.11		SANParks	Rainfall,Temperature, RelativeHumidity, Wind speed, wind direction
» Bone density and Calcium and Phosphorus content of the giraffe (<i>Giraffa camelopardalis</i>) and African buffalo (<i>Syncerus caffer</i>) skeletons ID: judithk.204.9	Van Schalkwyk	University of Pretoria	Giraffe Buffalo Calcium content Phosphorous content
» Determining Dominance: The correlation between access to food and group defense in African buffalo ID: judithk.697.6		SANParks	African buffalo, cows, dominance hierarchies, Syncerus caffer
» Development of a remote sensing based index for monitoring vegetation structure ID: judithk.697.6	Kruger	SANParks	Experimental Burn Plots

Challenges for 2007

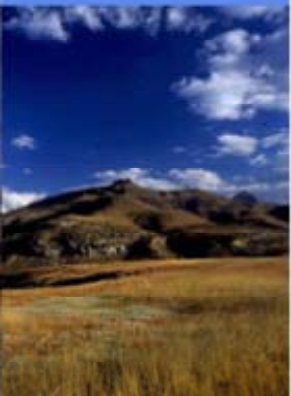
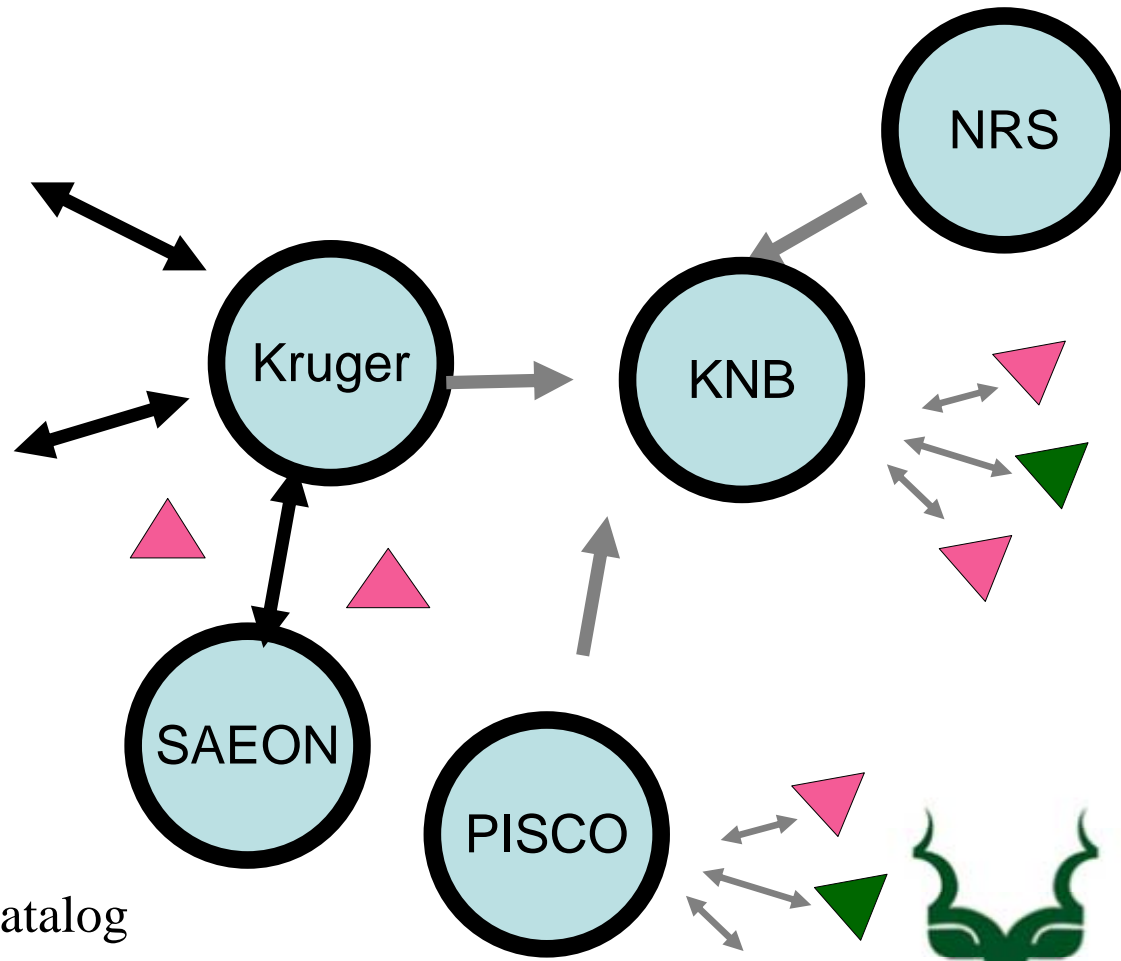
- Adding Spatial data
- Broadening this to including data from other SANParks and SAEON sites
- Linking with International ecological databases

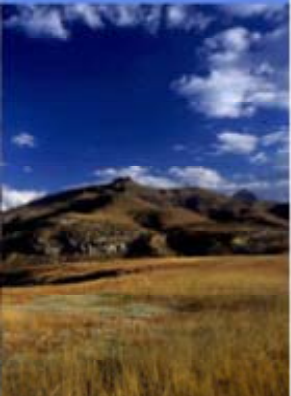


Building a South African Community



Building an International Community





Cybertracker



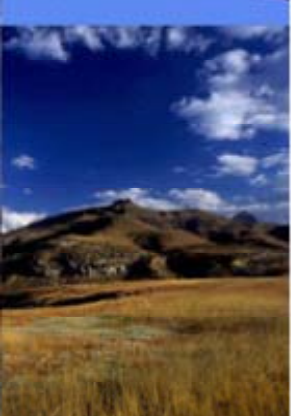
- Cybertracker program used by ranger corps on a day to day basis
- Donations received will replace 90 units. Still need funds for an additional 22
- These new units have an increased memory a moving map and an improved software version



•version

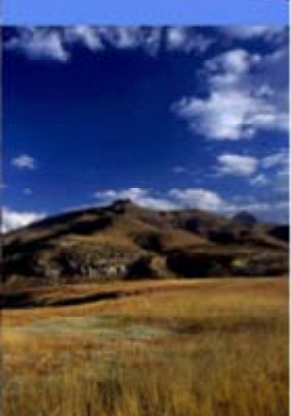
Challenge for 2007

- Sourcing the funds for additional 22 KNP units
- Setting up cybertracker programs for all other SANParks



TPC development

- Focussed on developing KNP TPC's
- Challenges 2007
 - Automating TPC analyses
 - Deploying TPC solutions to other parks



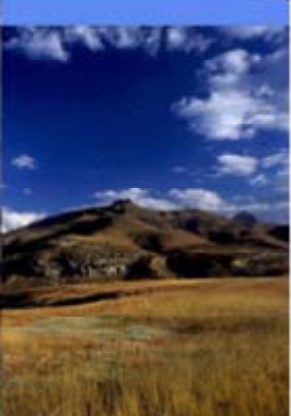
Buffalo TPC Case Study

- Buffalo TPC

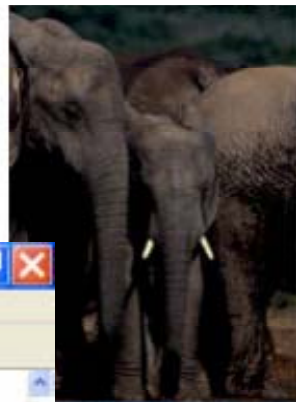
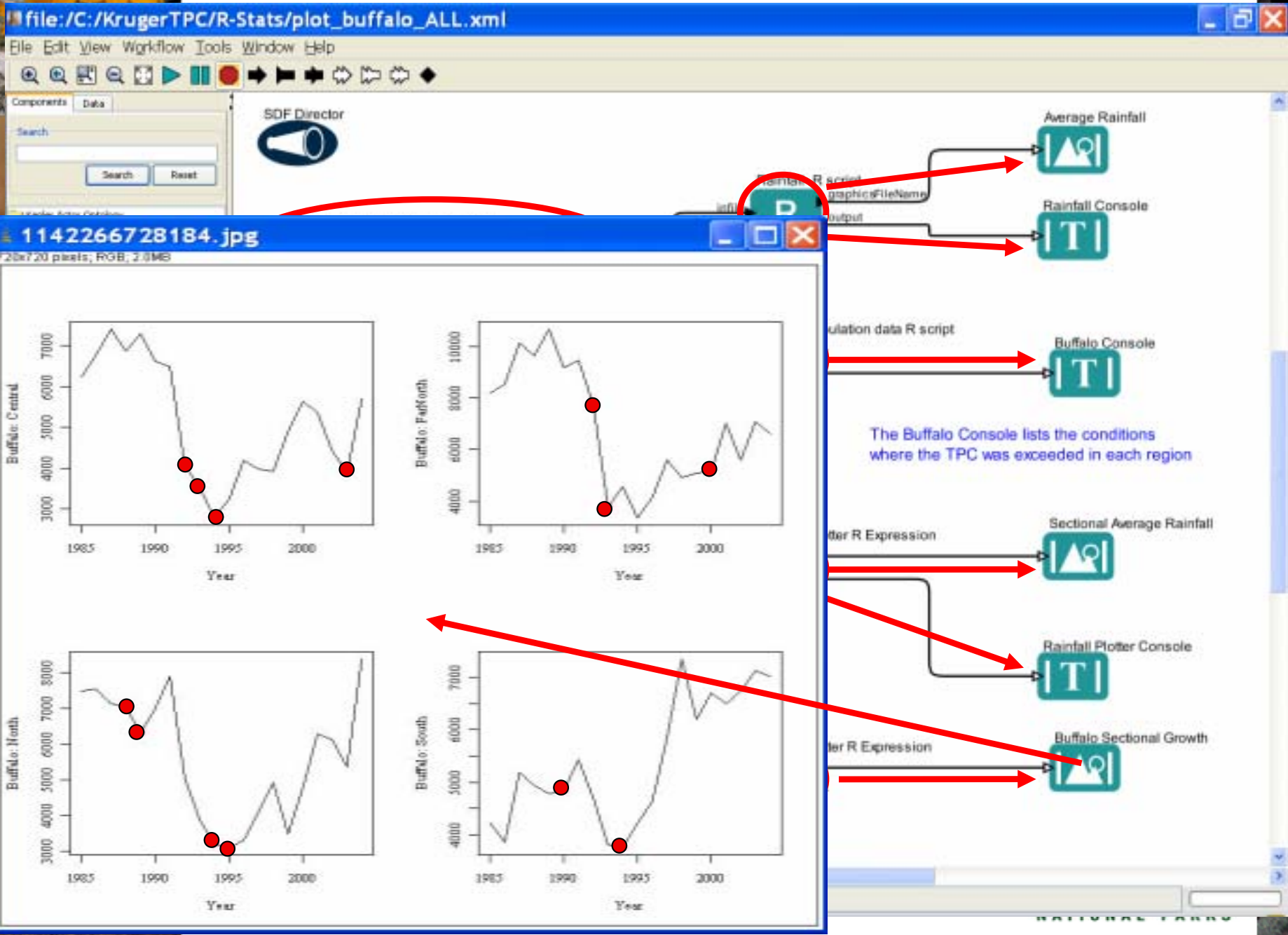
- If, during a “Wet Cycle”, the zonal population growth of Buffaloes is below 5% for three consecutive years, and the total Buffalo population is $\leq 30,000$ animals, then the Buffalo TPC has been exceeded

- Task: Use Kepler to implement Buffalo TPC

- data ingestion, analyses, models, visualizations
 - Enable subject-area experts to create scientific workflows
 - Managers to understand and run models at appropriate times

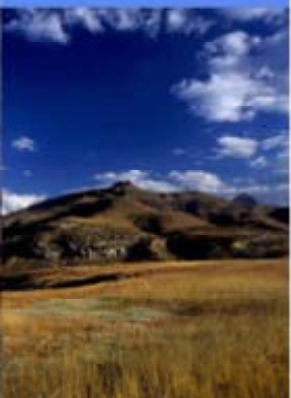


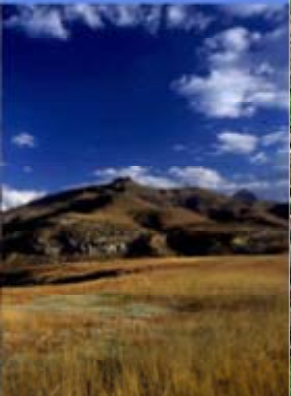
Kruger Park Buffalo Thresholds



Aligning monitoring programs with TPC;s

- Monitoring programs changed substantially
- Inclusion of new elements and changed locations and techniques



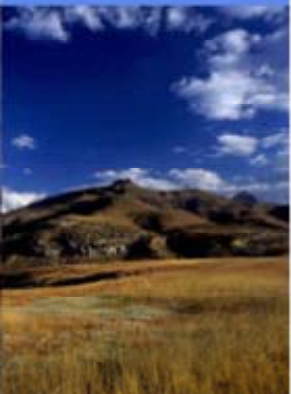






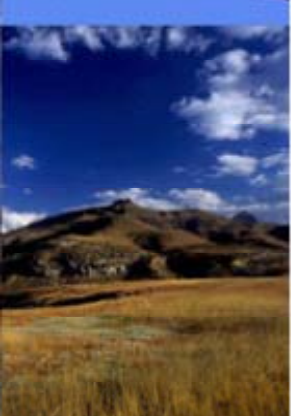
Monitoring challenges for 2007

- Continue to mark sites in KNP so that revised surveys can take place in 2008 at all these sites
- Broaden this to Mapungubwe Marakele and mark sites in these parks
- Conduct surveys at already marked sites in Kruger
- Conduct these programs in all parks



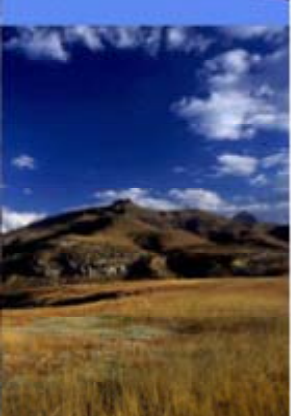
Science Extension

- Michele Hofmeyr appointed in November 2007



Researcher Support

- Online data
- Wireless network in Research camp and Parkhomes
- Extend this to certain offices in Scientific Services Buildings
- Try to improve facilities and services for researchers and comments and suggestions would be appreciated



Thank you

- Thank all staff that work with me in Science Support
- Staff at NCEAS
- A.W. Mellon Foundation
- Researchers and scientists that have and will be contributing and using data

judithk@sanparks.org

<http://dataknp.sanparks.org>

